**Kinetic theory approach of the dispersion relation of a cylindrical
magnetized plasma waveguide** HADI ZAKERI KHATIR, MOJTABA FARZIN
AGHAMIR — The effect of a magnetized plasma column in a cylindrical waveguide
is considered on the basis of Vlasof equation. The dispersion relation is obtained
through the solutions of the wave equation in the plasma as well as the vacuum
regions and the application of the appropriate boundary conditions. The magnetized
plasma is considered as collisionless and nondegenerate. The equilibrium particle
distribution is assumed to be Maxwellian for nondegenerate plasma. The results of
the numerical analyses of this study are compared with the previous investigations
in which the MHD equations are utilized for the dispersive characteristics of the
waveguide.

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Date submitted: 25 May 2010   Electronic form version 1.4